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ABSTRACT

Designed to measure the subject's ability to discriminate among alphabetic letters varied over three spatial dimensions (left-right, vertical, and combination left-right and vertical), the tests can be administered in groups and take about twenty minutes to complete. Ten letters of the alphabet were selected for assymetry (for example, b-d) and matching (n-u). Each letter is represented in two items and is tested when the letters are in isolation, in the context of words, and in the context of words in sentences. [This document is one of those reviewed in The Research Instruments Project (TRIP) monograph "Measures for Research and Evaluation in the English Language Arts" to be published by the Committee on Research of the National Council of Teachers of English in cooperation with the ERIC Clearinghouse on Reading and Communication Skills. A TRIP review which precedes the document lists its category (Reading), title, author, date, and age range (preschool, primary), and describes the instrument's purpose and physical characteristics.] (RB)

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The Research Instruments Project (TRIP)

ED 091724

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Category: Reading

Title: Letter Directionality Test
Word Directionality Test
Sentence Directionality Test

Author: Brian T. Twohig

Age Range: Pre-School - Primary

Description of Instrument

Purpose: This test is designed to measure the subject's ability to discriminate between alphabetic letters varied over three spatial dimensions (left-right, vertical, combination left-right, vertical).

Date of Construction: 1972

Physical Description: Ten letters of the alphabet were selected for the following reasons. Firstly, the letter had to be assymetrical in order that it could be drawn in different spatial orientations without becoming an actual match of itself (i.e. b-d versus v-v). Secondly, each letter when spatially transformed matched another letter (n-u) or closely approximated another letter (h-y). Each letter is represented in two items and is tested when the letters are in isolation, in the context of words, and in the context of words in sentences. The tests can be administered in groups and take about twenty minutes to complete. The pupils are instructed to put their finger on the first letter (word, sentence), and to find a letter, (word, sentence) just like it and put a mark through it with a pencil.

Letter Directionality

q g d p g b

Word Directionality

weh nib weh wey wed wep

Sentence Directionality

Sit on the chair.

Sit on the chair.

Sit in the shade.

Sit on the chair.

Sif on the chair.

Sit cn the chair.

Validity, Reliability and Normative Data:

Normative data are based on the performance of thirty boys and thirty girls who were completing grade one. Means and standard deviations are provided for scores obtained, and for times taken to complete the test, for high, average and low readers. Content validity is discussed for the test. Letters were rotated so that they represented the dimensions "left-right", "vertical", and "combination left-right and vertical." The order of test items was randomized as was the order of letters in words and sentences. Correlations between test scores and word accuracy scores on The Neale Analysis Test of Reading Ability were .33, .13, .56, .48, for letters, words, sentences and total, respectively. All coefficients except the second were significant at the .01 level. The split-half method was used to establish reliability for the test. When corrected by the Spearman-Brown formula for length, the coefficients were .66, .41, .90 for letters, words and sentences, respectively.

Ordering Information:

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Related Documents:

Twohig, Brian T. An investigation into the Relationship Between Body Directionality, Letter Directionality, and Reading Achievement of Grade One Children. Unpublished Master's Thesis. The University of Alberta, Edmonton, Alberta, 1972.

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Brian T. Twohig
"Letter Directionality Test"
"Word Directionality Test"
"Sentence Directionality Test"
1972

g	p	g	6	j	d
w	ɛ	ʍ	v	w	ɜ
q	g	d	p	q	b
f	ɟ	f	j	ɟ	ɟ
h	ɥ	ɥ	k	ʮ	h
u	ʊ	ɲ	u	m	ɲ
b	b	d	p	l	q
t	t	ʇ	ſ	k	ɟ
y	ʏ	ʎ	ʎ	v	y
d	q	d	p	b	j
r	ɹ	c	ɹ	r	ɹ
ɲ	u	ɲ	ɲ	m	ʊ
h	h	ʮ	ɥ	k	ɥ
b	q	d	l	p	b
y	y	ʎ	v	ʎ	ʏ
f	ɟ	f	ɟ	j	ɟ
r	c	ɹ	r	ɹ	ɹ
d	q	j	b	d	p
ɲ	u	v	ɲ	ʊ	ɲ
t	ſ	ʇ	ʇ	k	t
q	p	g	d	q	b
u	ɯ	u	ɲ	ʊ	ɲ

ges	ges	pon	ges	ges	ges
lem	leƎ	lew	lem	leƎ	kiz
weh	nib	weh	weq	werl	wep
bek	dek	laf	pek	bek	qek
yev	λev	yev	λev	ruj	yev
zef	zel	suk	zef	zel	zel
rec	ɹec	vin	ɹec	rec	ɹec
ved	nog	vep	ved	veb	veq
leh	leu	leh	lerr	kac	leɹ
tek	tek	fek	lud	ʔek	jek
geq	geq	ged	jon	gep	geb
jeu	jeu	jerr	jeh	zas	jeɹ
fedal	fedal	ledal	kelan	ledal	jedal
cevar	cenac	cevaɹ	cevaı	cevaı	cevar
meuav	merrav	recam	meɹav	meuav	menav
jeyag	jeyag	jeyag	jeλag	jeλag	pejap
qejac	geyaj	qejac	dejac	bejac	pejac
gekab	gekap	gekaq	gekad	gekab	jetar
veham	veɹam	revac	veuam	verram	veham
kehak	keyak	kerlak	kehak	ledat	keɹak
dekal	telat	dekal	bekal	qekal	pekal
delat	delaf	delat	delat	kedan	delal

The water is cold.	The ɯater is cold.
	The ʒater is cold.
	The water is cold.
	The ɛater is cold.
	The movie is over.
They found gold.	They found ɒold.
	They found ∂old.
	They found gold.
	They sound poor.
	They found ɓold.

The hen is white.	The man is right.
	The ɳen is white.
	The ɥen is white.
	The hen is white.
	The ɸen is white.
I wash in the tub.	I wash in the tup.
	I wash in the tuq.
	I wash in the tud.
	I work in the sea.
	I wash in the tub.
He is a good boy.	It is a hard toy.
	He is a good boy.
	He is a good boʎ.
	He is a good boɣ.
	He is a good boʎ.
The water is free.	The water is free.
	The water is ɬree.
	The water is ɮree.
	The paper is blue.
	The water is ɬree.

The car is red.	The car is red. The car is ɹed. The tar is hot. The car is ɹed. The car is ɹed.
The dog is heavy.	The bog is heavy. The log is light. The qog is heavy. The dog is heavy. The pog is heavy.
It was an ant.	It was an aust. It ran to him. It was an antt. It was an ant. It was an aut.
Sit on the chair.	Sil on the chair. Sit in the shade. Sit on the chair. Sif on the chair. Sit on the chair.
You walk quickly.	You walk buickly. You walk quickly. You walk puickly. You wait quietly. You walk duickly.
He is up high.	He is np high. He is ɹp high. He is at home. He is ɹp high. He is up high.

Some roads are long.	Some roabs are long. Some roots are long. Some roads are long. Some roaps are long. Some roaqs are long.
They have nine cats.	They have more cats. They have niue cats. They have nise cats. They have niue cats. They have nine cats.
The old tile is broken	The old tile is broken. The old file is broken. The old jile is broken. The old lile is broken. The old line is broken.
The bad boy ran home.	The dad boy ran home. The sad boy ran home. The bad boy ran home. The pad boy ran home. The qad boy ran home.
He likes to laugh.	He likes to lausgh. He likes to laugh. He likes to langh. He likes to teach. He likes to lasrgh.
The roof is leaking.	The root is leaking. The roof is leaking. The root is leaking. The roof is leaking. The room is leaking.

A queen lives here.	A crane lives here. A dueen lives here. A pueen lives here. A queen lives here. A bueen lives here.
Mother held the baby.	Mothet held the baby. Martha held the baby. Mother held the baby. Mother held the baby. Mother held the baby.
The yard is green.	The yard is green. The hard is green. The hard is green. The card is green. The yard is green.
The wall is very high.	The wall is very nigh. The wall is very high. The wall is very hard. The wall is very High. The wall is very High.

TABLE 3

MEANS AND STANDARD DEVIATIONS OF DIRECTIONALITY TESTS OVER HIGH, AVERAGE AND LOW READING GROUPS

READING ABILITY LEVEL		Directionality Tests									
			Body Total=30		Letters Total=20		Words Total=20		Sentences Total=20		Total Total=60
	High	$\bar{X}$	28.45	$\bar{X}$	19.29	$\bar{X}$	17.34	$\bar{X}$	15.95	$\bar{X}$	52.54
		S.D.	2.50	S.D.	1.41	S.D.	1.89	S.D.	2.63	S.D.	5.24
	Average	$\bar{X}$	25.00	$\bar{X}$	19.25	$\bar{X}$	17.05	$\bar{X}$	14.75	$\bar{X}$	50.45
		S.D.	4.21	S.D.	.80	S.D.	2.28	S.D.	2.77	S.D.	4.41
	Low	$\bar{X}$	24.75	$\bar{X}$	18.00	$\bar{X}$	16.35	$\bar{X}$	10.70	$\bar{X}$	45.05
		S.D.	3.89	S.D.	2.05	S.D.	2.06	S.D.	3.48	S.D.	6.08
			7820		5654		5074		4140		

TABLE 11

MEANS AND STANDARD DEVIATIONS OF DIRECTIONALITY TEST TIMES OVER HIGH, AVERAGE AND LOW READING GROUPS

			DIRECTIONALITY TESTS			
			Letter	Word	Sentence	Total
Reading Achievement Groups	High	$\bar{X}$	109.90	157.95	283.65	551.50
		S.D.	28.13	36.90	70.47	107.69
	Average	$\bar{X}$	122.40	180.55	322.85	625.80
		S.D.	25.14	40.49	104.29	140.90
	Low	$\bar{X}$	144.55	226.20	394.80	755.55
		S.D.	39.45	71.05	108.17	164.30